DRAFT Preliminary Assessment Petition

Region IX United States Environmental Protection Agency
Superfund Division
75 Hawthorne Street
San Francisco, California 94105

Under the authority of CERCLA Section 105 (d), as amended, the petitioner

(Name): Orange County Water District

(Address): 18700 Ward Street, Fountain Valley, California 92708

(Telephone Number): (714) 378-3337

Hereby requests that Region IX conduct a preliminary assessment of the suspected release of a hazardous substance, pollutant, or contaminant at the following location:

Location Description: The site is located at 301 East Orangethorpe Avenue in Anaheim, California and is referred to as the Northrop Y-12 Site. The site is located in an industrial area approximately 0.4 miles north of Highway 91, between South Lemon Street and Raymond Avenue. Figure 1 is a site location map.

Petitioner is affected by the release because: The groundwater basin that underlies the northern and central portions of Orange County is the source of potable water for more than 20 cities and water agencies that serve more than 2.3 million Orange County residents. Groundwater beneath the northern portion of the Orange County Groundwater Basin (referred to herein as North Basin) has been impacted by Volatile Organic Compounds (VOCs) at concentrations exceeding drinking water standards. Through its enabling legislation, Orange County Water District is responsible for managing groundwater supplies, including water quality, within the entire Groundwater Basin. To date, four water supply wells in the North Basin area have been closed due to VOC contamination, and approximately 10 additional water supply wells are threatened. The impacted areas are associated with chemical releases at multiple long-term industrial sites in the area. Historic operations at the Y-12 Site included machining, forming, and chemical treatment (i.e., vapor degreasing and metal quenching) of floor beams for aircraft. Available soil, soil vapor, and groundwater data collected at the site suggest that this site may be a significant contributor to the North Basin groundwater contamination.

Type or characteristics of the substances involved: Available soil, soil vapor, and groundwater data collected to date indicate that trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and tetrachloroethene (PCE) were released at the site. These VOCs and their breakdown products have been detected in soil and soil vapor near former operations and along the downgradient site boundary. VOCs have also been detected in groundwater in the upper part of the shallow aquifer in the northeast (upgradient) side of the site, and at higher concentrations in groundwater on the west (downgradient) side of the site. VOCs have also been detected in groundwater offsite and downgradient of the site. Bromate has been traced from the onsite circulation well, which is operated to remediate onsite groundwater, to offsite wells downgradient of the site, demonstrating that chemicals can migrate offsite in groundwater.

Nature and history of any activities that have occurred regarding the release: From 1962 to 1994, the site was used to manufacture and process floor beams for aircraft. Activities

involving chemical usage included vapor degreasing using solvents and metal quenching in a quench tank that was cleaned with solvents. Other chemical management activities include storage of solvents and other chemicals, and storage of hazardous waste; onsite wastewater treatment; and discharge into the sewer. The chemicals present in subsurface media at the site demonstrate the releases have occurred.

Ongoing remediation at the site includes operation of a soil vapor extraction and treatment system, and an onsite groundwater circulation well located at the western (downgradient) site boundary. The soil vapor extraction system has reportedly removed more than 20,000 pounds of VOCs from soil. The circulation well intakes VOC-impacted groundwater from the upper portion of the Shallow Aquifer, treats the water in-situ using peroxide and ultraviolet light, and discharges the treated water deeper in the same aquifer. Groundwater monitoring is also performed within and downgradient of the site (selected wells shown on Figure 2).

Although groundwater remediation is ongoing, recent TCE concentrations in several monitoring wells near the circulation well have increased sharply. Moreover, the capture zone of the circulation well is approximately 150 feet wide north to south; which is significantly less than the width of the building, or the VOC plume in groundwater, based upon current TCE concentrations. VOC concentrations in monitoring wells north of the circulation well are elevated so the northern boundary of the VOC plume has not been established. Therefore the existing groundwater remediation system is not completely capturing VOCs migrating from the site.

State and local authorities you have contacted about the release and the response, if any: On the Regional Water Quality Control Board's website (Geotracker), the status of this site is "Open – Remediation as of 8/1/1995". The Regional Board has required Northrop to perform onsite soil and groundwater remediation. Over the past several years, OCWD staff have met with Regional Board staff on several occasions to express concern regarding the effectiveness and adequacy of the soil and groundwater remediation. OCWD is particularly concerned about the lack of offsite groundwater remediation. A presentation was given to the Regional Water Quality Control Board in August 2014 to discuss current conditions: TCE concentrations are increasing in onsite groundwater north of the circulation well capture zone; this VOC-impacted groundwater is not captured and is exiting the site; the lack of groundwater characterization north of the circulation well capture zone prevents assessment of how much VOC mass is leaving the site and prevents better evaluation of how the groundwater remediation system should be expanded; the extent of and chemical impact to the perched zone has not been fully characterized; zone lack of groundwater characterization on the upgradient side of the site prevents assessment of how much chemical mass is contributed by Y-12; chemicals contributed by the site and escaping downgradient are not being remediated.

Figure 1: Site Vicinity Map

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Preliminary Assessment Petition

Northrop Y-12 Site
301 East Orangethorpe Avenue, Fullerton, California

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